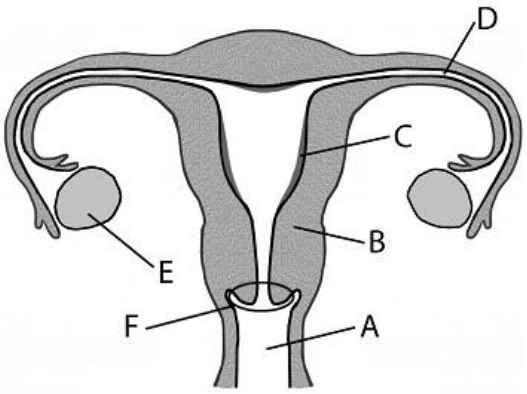
Mr C Biology **Sexual Reproduction in Humans** **90 Marks**

(a) (i) In humans, widening of the female hips is one example of *physical changes that distinguish the sexes but are not essential for reproduction.*
To what term does the definition in italics refer?

(ii) What term is used for the time in a young person's life when such changes take place?

(iii) Name the hormone that maintains such changes throughout the life of a male.

(b) The diagram shows the reproductive system of the human female.



(i) Name the parts labelled A, B, C, D, E and F.

(ii) Using the letters from part (i), identify the following locations:
1. Where meiosis occurs.
2. Where zygote formation occurs.
3. Where implantation occurs.

(iii) Describe the role of oestrogen **and** progesterone in the control of the events of the menstrual cycle.

(c) Answer the following questions in relation to the development of a human zygote.

(i) By which type of cell division does the zygote divide?

(ii) Further divisions result in the formation of a morula. What is the next developmental stage after the morula?

(iii) The placenta forms from tissues of the mother and the foetus. Give **two** roles of the placenta.

(iv) Give **one** change experienced by the mother that indicates to her that the birth process is starting.

(v) Give a short account of the birth process.

(a) (i) What is semen?
(ii) Draw a labelled diagram of the reproductive system of the human male.
On your diagram, indicate clearly **and** name the part at which **each** of the following occurs:
1. Production of sperm cells.
2. Maturing of sperm cells.
3. Mixing of fluid with sperm cells.
4. Transport of semen.
(iii) State **two** secondary sexual characteristics of the human male.
(iv) What maintains the secondary sexual characteristics in the adult human male?